

REMARKS

In the Office Action mailed July 30, 2007, the Examiner noted that claims 1-32 were pending and rejected claims 1-32. Claims 1, 8, 15, 19, 24-26 and 28 have been amended, claims 3, 4, 10, 11, 21, 22, 30 and 31 have been canceled, new claim 33 has been added; and, thus, in view of the foregoing claims 1-33 remain pending for reconsideration which is requested. No new matter is believed to have been added. The Examiner's rejections are respectfully traversed below.

PTO FORM-1449

In the PTO Form-1449 attached to the Office Action, the Examiner did not consider the references AG and AH. The Examiner is respectfully requested to either consider the references or contact the undersigned to address the matter with respect to considering the references cited AG and AH in the PTO Form 1449.

Rejection under 35 U.S.C. § 103(a)

At item 2 on pages 2-5 of the Office Action, claims 1-32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Publication No. 2006/0041614 (Oe) and further in view of U.S. Patent Publication No. 2003/0154281 (Mitsuoka et al.).

With respect to claims 1, 8, 15, 19, 24 and 28, item 2, page 2 of the Office Action asserted that Oe discloses the features of the above mentioned claims. However, claim 1, for example, has been amended to recite “**managing collectively**, in said management server, the **respective storage areas** of the storage apparatuses of the **respective servers** thus registered **using different storage area usage ways including at least one of a single usage way, an integrated usage way, a multiplicate usage way and a divided usage way**” (claim 1, lines 6-9, emphasis is added) which is supported by the embodiment of the present invention on page 6, line 5 to page 8, line 10 of the Specification. Claims 8, 15, 19, 24 and 28 have been amended to emphasize similar features as in claim 1.

By at least the aforementioned features of claim 1, for example, the management server manages the disk storage areas of the plurality servers using different usage ways (e.g. single usage way, integrated usage way, multiplicate usage way, divided usage way, etc.). As a result, it is possible to share the disk storage areas by the plurality of servers efficiently.

However, it is respectfully submitted that Oe does not teach or suggest at least the features mentioned above with respect to claims 1, 8, 15, 19, 24 and 28. Rather, Oe relates to a

data access responding system (see Oe, Abstract). Particularly, Oe relates to accessing a storage apparatus, such as a hard disk apparatus or such, from a client apparatus, such as a personal computer or a workstation (see Oe, paragraph [0003]). Item 5, page 5 of the Office Action asserted that page 7, paragraph [0099] of Oe discloses "different storage usage ways comprising at least one of a single usage way, an integrated usage way, a multiply usage way and a divided usage way". However, such a feature is not described in Oe because paragraphs [0098]-[1000] are silent as to the feature described above. Rather, paragraph [0098] of Oe describes:

[when] an access request is made from the client apparatus 7 having the relevant storage location information already stored ... the client apparatus 7 first searches the cache memory 71 for the storage location information for the file A concerning the current access request ... when recognizing that the storage location information for the file A is stored in the cache memory 71 (Step S-5), the client apparatus 7 directly accesses the cache apparatus 4... based on this storage location information for the file A without making an access request to the control apparatus 2 (Step S-6).

Stated another way, when an access request is made, the client apparatus directly accesses the cache apparatus when recognizing that the storage location information for file A is in cache memory 71.

Further, paragraph [0099] of Oe describes:

[the] protection tag ptag in the cache apparatus 4 is replaced by 'ptag=yy' from the original one, i.e. 'ptag = xx' ... [accordingly], the file A, designated by the original storage location information ... cannot be found out from the cache apparatus 4. As a result, the cache apparatus 4 notifies the client apparatus 7 that the relevant request results in an error (Step S-8). Based on this error notification from the cache apparatus 4, the client apparatus 7 deletes the storage location information for the file A from the cache memory 71 (Step S-9) by determining that the relevant storage location information is no more valid.

Stated another way, because the protection tag in the cache apparatus is replaced the file requested by the client apparatus cannot be found. As a result, the client apparatus will delete the storage location information for file A from the cache memory.

Moreover, paragraph [0100] of Oe describes:

when the client apparatus 7 makes an access request for the file A again ... the client apparatus 7 then makes an access request to the control apparatus 2 ... [when] the access request is made ... the control apparatus 2 interprets the contents of the access request. When recognizing that the relevant access request is for the file A, the control apparatus 2 searches the management table and determines whether or not the file A is stored in the cache apparatus 4. When determining that the file A is stored in the cache apparatus 4, the control apparatus 2 send a data transfer instruction ... to the cache apparatus 4 (Step S-12). At this time, client apparatus 7 can be identified with the use of the IP address or such. At the same time, the control apparatus 2 attaches the storage

location information for the file A to the data transfer instruction to be sent to the cache apparatus 4. The storage location information for the file A now includes the protection tag, which is replaced with 'ptag=yy' as mentioned above.

Stated another way, when the client apparatus makes an request for file A, but this time to the control apparatus, the control apparatus searches and determines whether file A is stored in the cache apparatus. Therefore, paragraphs [0098]-[0100] describe a client apparatus attempting to access a file stored in the cache apparatus.

However, in claim 1, for example, the management server "manag[es] collectively ... the respective storage areas ... of the respective servers ... using different storage area usage ways including at least one of a single usage way, an integrated usage way, a multiplicate usage way and a divided usage way". As a result, it is possible to share the storage areas of the plurality of servers more efficiently. This feature is not described in Oe since the relevant portions of Oe is primarily related to attempting to access files in a cache apparatus. Further, Oe is not concerned with sharing the storage areas of plurality of servers more efficiently, since Oe is directed to a data access responding system. Therefore, attempting to access files in a cache apparatus as described in Oe does not constitute collectively managing respective storage area using different storage area usage ways as mentioned in claim 1, for example.

Thus, claims 1, 8, 15, 19, 24 and 28 patentably distinguish over Oe taken alone. Further, Mitsuoka et al. relates to a storage system and method for controlling a storage system (see Mitsuoka et al., Abstract). However, nothing was found in Mitsuoka et al. that cures the deficiencies of Oe as discussed above with respect to claim 1, for example. Therefore, it is respectfully submitted that claims 1, 8, 15, 19, 24 and 28 patentably distinguish over the combination of Oe and Mitsuoka et al. The dependent claims patentably distinguish over the combination of Oe and Mitsuoka et al. for at least the same reasons as their respective base claims.

Accordingly, Applicants respectfully requests that the rejection under 35 U.S.C. § 103(a) be withdrawn.

New Claim

New claim 33 has been added to recite:

33. (New) A method, comprising:
 registering a plurality of storage usage ways related to storage areas of
 respective servers in a management table of the management server; and
 managing the storage areas of respective servers using the registered
 plurality of storage usage ways to share the storage areas among the respective
 servers.

It is respectfully submitted that the combination of Oe and Mitsuoka et al. fails to teach or suggest the above-mentioned features in new claim 33. Therefore, it is respectfully submitted that claim 33 patentably distinguishes over the combination of Oe and Mitsuoka et al.

Summary

In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot. Further, all pending claims patentably distinguish over the prior art. There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.


Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If any further fees, other than and except for the issue fee, are necessary with respect to this paper, the U.S.P.T.O. is requested to obtain the same from deposit account number 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: November 30, 2007

By: 
Sheetal S. Patel
Registration No. 59,326

1201 New York Avenue, N.W., 7th Floor
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501